Catalogue of American Amphibians and Reptiles.

McCranie, James R. 1983. *Crotalus pusillus.*

Crotalus pusillus Klauber
Southwestern Mexican dusky rattlesnake

Crotalus triseriatus triseriatus: Gloyd, 1940:84 (part).
Crotalus triseriatus triseriatus: Schmidt and Shannon, 1947:84 (part).
Crotalus pusillus Klauber, 1952:34. Type-locality, "Tancítaro, Michoacán, Mexico, altitude 5000 feet." Holotype, Field Mus. Natur. Hist. 39112, adult male, collected by Frederick A. Shannon, between 25 June and 20 July 1941 (not examined by author).

- Content. *Crotalus pusillus* is a monotypic species.

- Definition. *Crotalus pusillus* is a small rattlesnake, ranging in size from about 175 mm at birth to about 675 mm. The dorsal pattern consists of a single series of large middorsal blotches (occasionally split anteriorly) and an auxiliary row of small spots on each side, the latter normally even with the middorsal blotches. The dorsal blotches number 33 to 50 and are usually dark brown and black-edged. The auxiliary spots are usually darker than the middorsal blotches. The ground color is grayish brown to pale brown. The venter is buff anteriorly, becoming progressively darker posteriorly, with the underside of the tail nearly solid black. There are no blotches on the venter. The proximal rattle matrix is black in adults. Scutellation is as follows: 23–25 (usually 23) scale rows at midbody, all keeled except for the lowest three; 150–161 ventrals in males, 150–162 in females; 28–33 subcaudals in males, 25–29 in females; supralabials 11–13; infralabials 10–13; prefoveals 1–5. The rostral and internasals are wider than high. The prefrontals (canthals) are paired and in contact and have even but convex posterior edges. There is a longitudinal crease near the outer edge of each prefrontal. The prefrontals are bordered posteriorly (intersupraoculars) by 1–4 scales; the anterior intersupraoculars are usually 2+3, 3+3 or 3+4, with the anterior row enlarged. The supraoculars are the largest of the head scales. The prenasal is larger than the postnasal, extending below the nostril to cut off contact of the postnasal with the first supralabial. The prenasal contacts the first supralabial and does not contact the loreal. The postnasal contacts both the internasal and prefrontal. The loreal is single and is separated from the supralabials. The upper preocular is not divided. The lower preocular passes above the pit and contacts the loreal. The anterior subocular contacts the fourth and fifth supralabials (rarely there is no contact between these scales). Also, infrequently, the anterior subocular is enlarged and contacts the fourth, fifth and sixth supralabials. The second subocular is not in contact with any supralabial. The posterior edge of the orbit is opposite the sixth or seventh supralabial. There are usually eight rattle fringe scales with the rattle being proportionately very small. There are 9–11 dentary, 7–9 pterygoid, and three palatine teeth. The hemipenis is divided with a bifurcate sulcus spermaticus, the sulcus dividing very near the base, with one branch carrying to the edge of the flattened outer end. The basal section is covered with spines, the spines being largest on the outer shoulders then decreasing in size distally and medially. There are approximately nine large spines on the outer shoulders. There are no spines in the crotch. The change from spines to fringes is abrupt. The fringes become more reticulate distally, the proximal fringes are quite spinulose. The outer ends are rounded and the ornamentation is reticulate.

- Descriptions. Klauber (1952) provided a good description of the scutellation, color pattern, sizes and proportions of the species. Duellman (1961) described the color pattern and scutellation of a series of fourteen specimens. Klauber (1972) provided tables on squamation, lengths and proportions. Brattstrom (1964) described the dentition and osteology.

- Illustrations. Black and white photographs of *Crotalus pusillus* are in Armstrong and Murphy (1979), Glenn and Straight (1982), and Harris and Simmons (1978). There is also a poor black and white photograph in Klauber (1972), which was inserted after Klauber's death. Armstrong and Murphy (1979) provided a habitat photograph. Brattstrom (1964) included line drawings of some osteological characters.

- Distribution. *Crotalus pusillus* is known from the Sierra de Coalcomán of southwestern Michoacán and the Cordillera Volcánica of westcentral Michoacán and adjacent southern Jalisco, México. *Crotalus pusillus* probably also occurs in northeastern

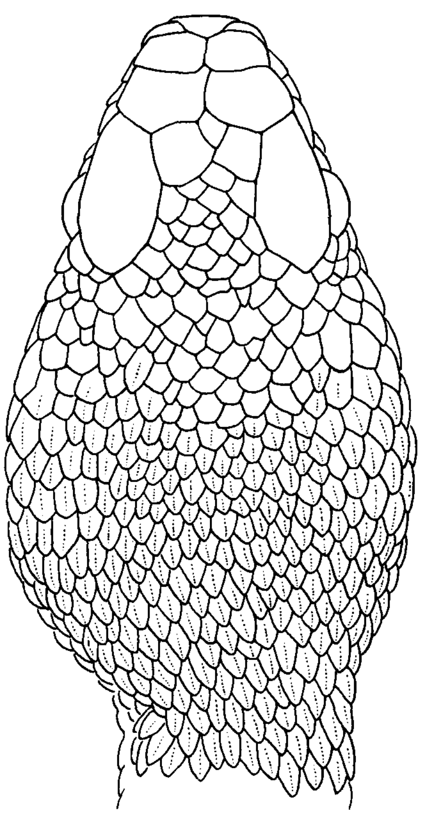
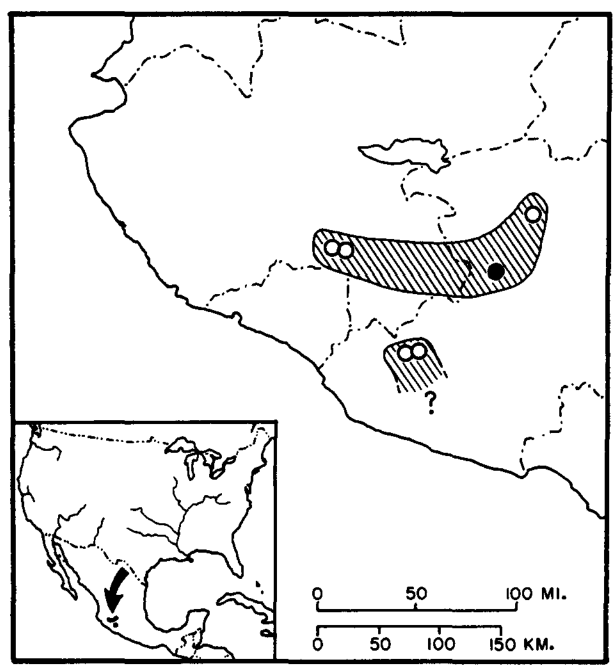


Figure 1. Dorsal illustration of head of UTACV-R-5846, ×3.2.



Map. The solid symbol marks the type locality; hollow symbols show other locality records. Shading covers the estimated range; question marks indicate uncertain range boundaries.

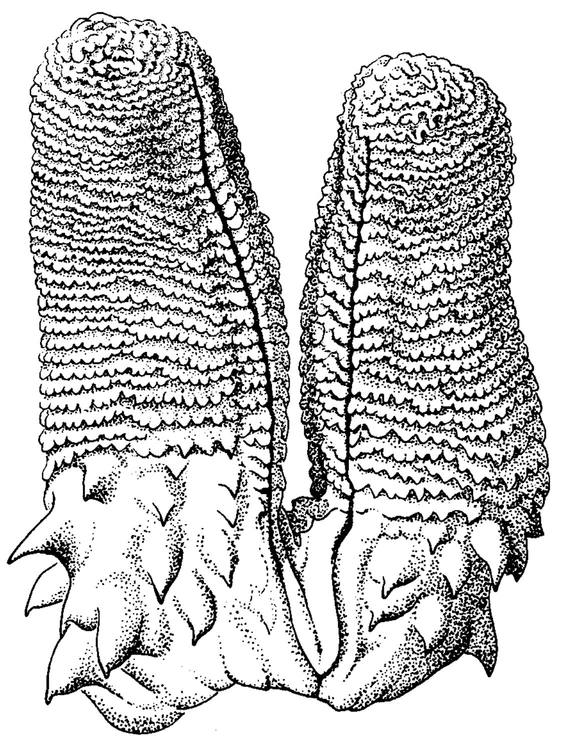


FIGURE 2. Right hemipenis of UTACV-R-9358, ×5.6.

Colima on the Volcán de Colima, since it has been collected on the nearby Nevado de Colima in the state of Jalisco. The species is generally found around limestone outcroppings in pine-oak forests, from 1525–2380 m. The upper elevational limit of 4400 m cited by Parker (1963) and Parker and Grandison (1977) pertains to *C. triseriatus*, not *C. pusillus*.

• FOSSIL RECORD. None.

• PERTINENT LITERATURE. Ecological information is available in Duellman (1961, 1965), Klauber (1972), and Armstrong and Murphy (1979). Guillette and Smith (1982) mentioned the same *C. pusillus* reported by Duellman (1961) that regurgitated a *Barisia*. Armstrong and Murphy (1979) described in detail a captive breeding, gave information on two litters and reported an observation of ritualized combat between captive males. Klauber (1952) compared the species in detail to *Crotalus triseriatus*. Campbell (1979) provided characters that distinguish *C. pusillus* from *C. triseriatus armstrongi* in Jalisco, México. Marx and Rabb (1972) analyzed several characteristics of *Crotalus pusillus* in comparison to many other advanced snakes. Diagnostic characters of *C. pusillus* are in the keys published by Klauber (1952, 1971, 1972). Smith and Smith (1973, 1976) listed the majority of the literature on the species. Van Bourgondien and Bothner (1969) used the species in their study of lung vessel patterns in New World pit vipers. Bowler (1977) reported on longevity in captivity.

• REMARKS. The first specimen of *Crotalus pusillus* was collected by Hans F. Gadow in 1904. Gadow (1908:513) collected the specimen (BM 1906.6.1.227) on the Nevado de Colima, Jalisco, apparently under a fallen tree trunk. The species was not collected again until 1940 when Frederick A. Shannon collected it on Cerro Tancítaro, Michoacán, and Edward H. Taylor secured a specimen near Carapan, Michoacán.

• ETYMOLOGY. The name *pusillus* is Latin, meaning small or insignificant.

COMMENT

Klauber (1952) questioned the identity of a specimen of rattlesnake from Chilpancingo, Guerrero, México, believing it to be either a *Crotalus pusillus* or a *Sistrurus ravus*. Campbell and Armstrong (1979) recently identified this specimen as *Sistrurus ravus* and used data from it to help prepare the variation section in their description of *Sistrurus ravus exiguus*, the Guerreran pygmy rattlesnake.

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